

ABSTRACT OF THE DISCLOSURE

A semiconductor device has a semiconductor substrate, 5 and a multi-layered wiring arrangement provided thereon. The multi-layered wiring arrangement includes at least one insulating layer structure having a metal wiring pattern formed therein. The insulating layer structure includes a first SiOCH layer, a second SiOCH layer formed on the first 10 SiOCH layer, and a silicon dioxide (SiO_2) layer formed on the second SiOCH layer. The second SiOCH layer features a carbon (C) density lower than that of the first SiOCH layer, a hydrogen (H) density lower than that of the first SiOCH layer, and an oxygen (O) density higher than that of the first SiOCH 15 layer.